

INCREASED SALES AND THEFTS OF CANDY AS A FUNCTION OF
SALES PROMOTION ACTIVITIES: PRELIMINARY FINDINGSNed Carter, Angeli Kindstedt, and Lennart Melin
Uppsala University

We used an A-B-A design to evaluate the effects of two commonly used promotional activities—price reduction and increased exposure, in combination and separately—on sales and thefts of candy at a grocery store. The combination of activities and the increased exposure condition produced the greatest increases in sales. The combination of activities was also associated with the greatest increase in thefts.

DESCRIPTORS: business problems, consumer behavior, theft, stimulus control, side effects

Behavior analysis has been proposed as a useful technology for understanding, predicting, and controlling consumer behavior (Rothschild & Gaidis, 1981). Although behavior analysts have shown that undesirable consumer behavior (i.e., theft) can be reduced with no negative effects upon sales (Carter, Holmström, Simpanen, & Melin, 1988; McNees, Egli, Marshall, Schnelle, & Risley, 1976), there seem to be no similar analyses of promotional activities and their effects on sales and theft in retail settings.

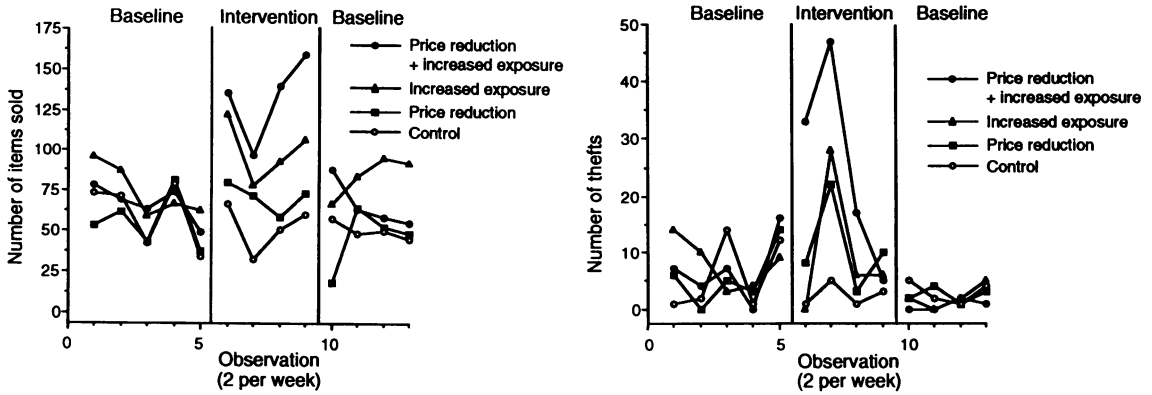
METHOD: The study was conducted at a grocery store described in previous research (Carter et al., 1988). The store used an optical price scanning system with cash registers connected to a computer that maintained data on sales, prices, and so forth. All target products were enclosed in factory packaging containing 13-digit bar codes. The store's antitheft activities were unchanged throughout the study. There were no reports of anyone being apprehended for stealing target products. Prior to the start of the study, the store owner selected 20 candy products as targets. The products, chocolate bars and packages of candy, were of similar price and size and would not be the objects of other promotional activities, although 40 other candy products were the object of some promotional activity during the study. All target products were normally located along one wall of the store, on four-tier wall shelves, and were visible to cashiers.

Measurement system. Retail theft was measured with the aid of optical scanning equipment (Carter et al., 1988). The study began with an inventory of target products to determine actual stock and recording of cumulative sales figures. After subsequent biweekly inventories (on Tuesdays and Fridays) conducted prior to store opening, sales and thefts for each target product were calculated. All differences between calculated and actual stock were considered to be theft. During the study, none of the target products were reported to be damaged or returned. Counts of actual stock greater than the figure for calculated stock occasioned a recount. When the number of thefts exceeded three for an individual product, the observer recounted. Miscounts were open to discovery at subsequent inventories.

Procedure. The study was conducted over 6.5 weeks. An A-B-A design was used to assess the effects of the intervention. The initial baseline period was 2.5 weeks (five inventories), followed by a 2-week intervention period (four inventories) and a second baseline (2 weeks, four inventories). The intervention period was limited to 2 weeks to comply with Swedish Board of Consumer Policy guidelines for retailers regarding the use of promotional activities. One observer inventoried target products. On two occasions in each phase, two observers conducted independent counts of five products. On all occasions, there was 100% agreement. After the final inventory of the baseline phase, the 20 products were ranked on the basis of both sales and thefts. On the basis of these rankings, four groups of five products, equivalent with respect to sales and shoplifting, were created. The four groups were then randomly assigned to one of three intervention conditions; price reduction and increased exposure (10% price reduction, red sales tags on shelves, regular shelf placement and on a floor rack 3 m distant), price reduction alone (10% price reduction, red sales tags on shelves, regular shelf placement), increased exposure alone (regular price, placement as in price reduction and exposure condition), or a control condition (regular price and regular placement).

RESULTS AND DISCUSSION: The numbers of target products sold and stolen during baseline and intervention phases are shown in the figure. In the combined condition, mean sales per week doubled. In the 10% price reduction condition, mean sales increased 28%. In the increased exposure condition, mean sales increased 35%. In the control condition, mean sales decreased by 12%. In the combined condition, thefts increased initially, from a mean of 13.6 thefts per week to a high of 51, and then declined. For this group alone, thefts increased for each product. In the 10% price reduction condition, thefts increased 90%. In the increased exposure condition, thefts increased by 12.5%. In the control condition, thefts decreased from 12 to 5 per week.

The methodology used in this study does not permit analyses of individual purchases or thefts. It is possible that substitution occurred during the intervention phase. Total sales and thefts of candy products might be relatively constant over time but may increase temporarily for given products as a function of promotional activities. Signs publicly identifying high-risk products (McNees et al., 1976) and other theft prevention measures (Carter et al., 1988) have been demonstrated to reduce thefts for a variety of products without producing a negative effect upon sales. Taken together with the data from this study, the effects of specific product identification (i.e., promotional activities and specific signs to reduce thefts) on sales and thefts appear to be asymmetric. The results are important because they suggest that promotional activities may increase sales volume but reduce net profit due to increased theft. Topics for further research include the extent to which



our results can be replicated in larger studies; identification of the functional variables responsible for increases in theft; the effects of other promotional activities, singly or in combination; and the effects of promotional activities on various product groups. Another issue is the observation of reduced theft among the products during the second baseline phase. At present, it is not known why thefts of these items decreased or if thefts of other products increased. For now, however, our results underscore the importance of considering potential negative side effects in the development of marketing programs and the possibility that marketing activities may affect theft reduction interventions.

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